

ABSTRACT OF THE DISCLOSURE

A ring transmission system includes a plurality of nodes that are connected to each other to form a ring by a bi-directional line switched ring (BLSR) method. The ring transmission system further includes a channel-adding node that adds a channel to the ring, and transmits a node identification (ID) of the channel-adding node to other nodes on the ring when creating a squelch table; and a channel-dropping node that drops the channel from the ring, and stores the node ID of the channel-adding node received directly from the channel-adding node or through the other nodes on the ring in the squelch table of the channel-dropping node, wherein the channel-dropping node detects a failed channel through which a signal does not reach the channel-dropping node among one or more channels dropped at the channel-dropping node based on information about a location of failure on the ring, a ring-topology table managed by the channel-dropping node, and the node ID of the channel-adding node stored in the squelch table of the channel-dropping node when the failure occurs on the ring, and inserts a squelch into the failed channel. By having the above-described structure, the ring transmission system is capable of executing squelch control on upper-level and lower-level channels such as STS1 and VT1 channels efficiently with a simple structure and control.

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